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## INVASIVE RADIOLOGY

### Michael A. Geisinger, MD

While it is usually difficult to date the beginning of any subspecialty, the field of Invasive Radiology probably began in 1952 when Sven-Ivar Seldinger presented his revolutionary technique of percutaneously placing a catheter within the vascular system for the injection of contrast material. Catheter angiography quickly became commonplace and has come to represent the "gold standard" for the depiction of the vascular system. The past two decades have seen the further evolution of the Seldinger technique resulting in the development of catheters for balloon angioplasty of stenotic arteries and for therapeutic embolization of tumors, arteriovenous malformations, and bleeding sites.

Over the years these catheter techniques have also been modified for use in the biliary and urinary tracts. Under fluoroscopy or one of the other imaging modalities, percutaneous access to the bile ducts or renal collecting system can be obtained, permitting placement of drainage catheters, removal of stones, and balloon dilation of strictures. Other procedures in the field of invasive radiology include needle biopsies, arthrograms, myelograms, and basically any procedure where an imaging modality is used to guide a needle accurately.

Since these procedures are by nature invasive, the risk of complication is higher than for a noninvasive radiologic examinations. Communication between the clinician and the invasive radiologist is important in order to minimize the risk of complication and to maximize the amount of information obtained from the procedure. All of these procedures require careful informed patient consent. Copyright © 1978-1999 Lexi-Comp Inc. All Rights Reserved

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